SONY

car stereo
Service Bulletin No.70

Technical Department
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Sony Drive, Park Ridge, New Jersey 07656

Model: CDX-5/R7

Date: November 14, 1986

Subject: Checking Method For F.O.P.

In sound skipping or unstable access operation.

Symptom:
(153)

1. Observe the oscilloscope waveform eye pattern in focus offset adjustment (fig.-1) and the waveform of 100 track jump in tracking offset adjustment. (fig.-2)

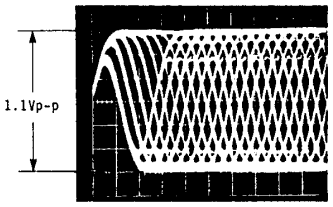

FIG.-1: RF (EYE PATTERN) WAVEFORM

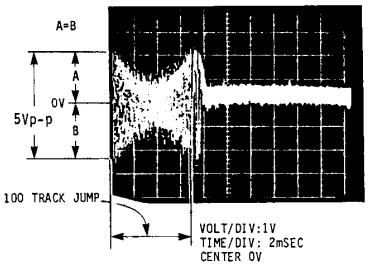

FIG.-2: 100 TRACK JUMP WAVEFORM

2. If you cannot obtain the waveform such as shown in fig-1 and fig-2, re-adjust the RF offset, focus offset and tracking offset. (Refer to your service manual).

Note: (1) Confirm each Vp-p level by the YEDS-1 or a few discs because of some tolerance of Vp-p level according to the disc.

(2) Adjust the Tracking/Focus adjustment only when replacing the parts.

3. It is necessary to change the F.O.P with the new one in the following condition.

   a. The RF VP-p (eye pattern) is under 0.8Vp-p. (normal: about 1.1Vp-p)

(Continued)

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b. The RF VP-p (100 track jump) is under 3Vp-p. (normal: about 5Vp-p)

c. The RF Vp-p is normal; however, the Vp-p (100 track jump) is low and statically determinate waveform is observed just after the 100 track jump. (Refer to fig-3.)

d. The statically determinate waveform is continuously observed just after the 100 track jump even if the Vp-p (100 track jump) is normal.

Note: (1) Sometimes in a normal unit, the statically determinate waveform can be observed.
(2) Be sure that there is no dust on the objective lens.

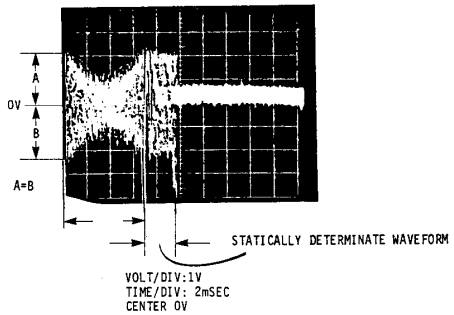
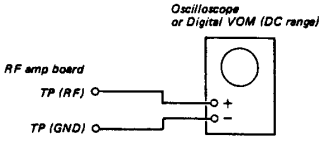


FIG.-3

RF OFFSET ADJUSTMENT

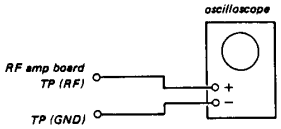
Procedure:

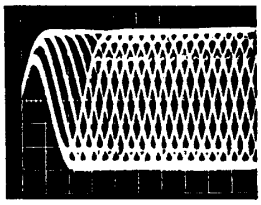


1. Remove the connector (CN3) on the main board.
2. Connect oscilloscope or digital VOM to the test points (RF), (GND) on the RF amp board.
3. Insert Disc (YEDS-1) and press ►PLAY button.
4. The disc is ejected from the set in a few seconds. Adjust RV651 on the RF amp board so the digital voltmeter reading is 100mV ± 10mV during the time before the disc is ejected.
5. After the adjustment, reconnect the CN3 connector.

FOCUS OFFSET ADJUSTMENT

Procedure:





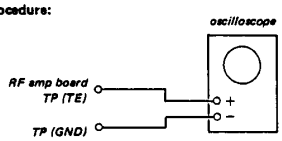
VOLT/DIV:200mV
TIME/DIV:0.5μSEC

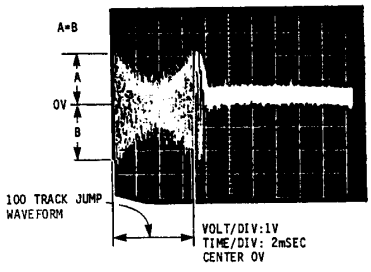
1. Connect the oscilloscope to the test points (RF) (GND) on the RF amp board.
2. Insert the disc (YEDS-1) and press ►PLAY button.
3. Adjust RV653 on the RF amp board so the oscilloscope waveform eye pattern is good. A good eye pattern means the diamond shape (◇) in the center of the waveform can be clearly distinguished.

TRACKING OFFSET ADJUSTMENT

– Coarse Adjustment –

Procedure:





VOLT/DIV:1V
TIME/DIV: 2mSEC
CENTER 0V

1. Connect the oscilloscope to the test points (TE), (GND) on the RF amp board.
2. Insert the disc (YEDS-1) and press ►PLAY button.
3. Press AMS ⏮, ⏭ key or └► button and observe the oscilloscope waveform for track jump.
4. Adjust RV 652 on the RF amp board so the oscilloscope waveform of 100 track jump is symmetrical above and below, relative to 0V.